GN40GAX GPON ONU (4GE+USB+GN40GAX) Specifications

Version	Date	Author	Reviewers	Remark
V1.0	2020/5/18			Shall not disclose to any third party

Contents

1.Overview

1.1 Product Positioning

GN40GAX terminal devices are designed for fulfilling FTTH and triple play service demand of fixed network operators or cable operators. The box is based on the mature Gigabit GPON technology, which have high ratio of performance to price.The device supports multi WAN connection of bridge or route, IPv4 and IPv6 protocol stack, multicast protocol, QoS and firewall function, easy Mesh function and TR069 management protocol.The device adopts the latest 802.11ax WiFi 6 technology standard and is compatible with 802.11ac/b/g/n， support 1800Mbps connecting rate. Support for USB2.0(optional) extension devices. They are Large transmission capacity and fast speed ， highly reliable and easy to maintain, with guaranteed QoS for different service. And It is fully compliant with technical regulations such as ITU-T G.984.x .

1.2 Network Mode

GN40GAX is the FTTH mode terminal equipment which designed for indoor applications. Specific application refers to Picture 1-1

Picture 1-1 GN40GAX Products Network diagram

2.Hardware Features

2.1 Interface of device

GN40GAX product figure as Picture 2-1

Table 2-1 Description GN40GAX equipment Interface

Port Type	Function
FIBRA	Connect PON port with internet by SC type, single mode optical fiber cable
USB1/USB2	Provide 2 USB ports to connect external devices
LAN 4/3/2/1	RJ45 Port connects to local internet, 4 GE port
RESET	Press down reset button and keep 5 seconds to make the device restart and recover from the factory default Settings.
POWER	Connect with power adapter, DC 12V
ON/OFF	Power turn on/off

2.2 Indicators of device

Table 2-2 GN40GAX LED statement

Indicators	status	Description
POWER	Light on	ONU power supply normally
	Light off	ONU no power supply
PON	Light on	ONU gateway registered
	Blink	ONU manage to link
	Light off	ONU not registered
LOS	Blink	Received optical power is lower than the sensitivity of the optical receiver.
	Light off	Received optical power is normal
2.4G	Light on	WiFi turn on
	Light off	Device is power off or WiFi turn off

	Blink	WiFi turn on and with ongoing data transmission
5G	Light on	WiFi turn on
	Light off	Device is power off or WiFi turn off
	Blink	WiFi turn on and with ongoing data transmission
NET	Light on	Internet is effective
	Light off	Internet WAN port is not configured or is not valid
LAN 1-4	Light on	network port linked, but no data transmitting
	Blink	network port data pass
	Light off	ONU no power supply or internet cable unlink
USB1/USB2	Light on	USB device is connected, but without ongoing data transmission
	Blink	USB is with ongoing data transmission
	Light off	Device is power off or USB device is not connected

3.Technical specifications

3.1 Physical structure, Environment and Electrical parameter

Table 3-1 GN40GAX specification and working environment

Parameter	Nominal
ETH Interface	4GE
Dimension	172mm×115mm×30mm (L×W×H)
Net weight	0.4kg
Typical power consumption	<9W
Noise	None

Cooling style	Naturally cooling
Power supply	12V DC（By external AC/DC adapter）
Installation style	Support PC, wall mount or put inside of information box.
Environment	-5~50℃

3.2 GPON Interface Specifications

Table 3-2 GN40GAX GPON Interface

Parameter	Nominal
Connector style	SC/PC
PON quantity	1
Fiber style	Single mode
Wavelength	TX：1310 +/-20nm RX：1490 +/-10nm
PON interface standard	ITU-T G.984.2/ITU-T G.984.3/ITU-TG.988 Class B+
PON interface receiving rate	2.488Gpbs
PON interface transmitting rate	1.244Gpbs
Output optical power	Min: 0. 5dBm Max: +5dBm
Opticalreceiver sensitivity	Precede -29dBm
The length of the optical link	Max 20km

3.3 WIFI Specifications

Table 3-3 GN40GAX WIFI Specifications

Standard	IEEE 802.11 ax/ac/b/g/n

WiFi parameter	Frequency	2.4~2.4835GHz 5GHz ： Low frequency 5.15GHz～5.25GHz、 Middle frequency 5.25GHz～5.35GHz、 High frequency 5.725GHz～5.825GHz
	Transmission speed	11ax:MCS0~MCS11， Max 1201Mbps(5GHz 2T2R), 573.5Mbps(2.4GHz 2T2R) 11ac:MCS0~MCS9， max 866.7Mbps(5GHz 2T2R) 11n:MCS0~MCS15， max 300Mbps(2.4GHz 2T2R) 11g： 54/48/36/24/18/12/9/6M(Auto) 11b ： 11/5.5/2/1M (Auto)
	Channel number	2.4GHz ：13 5GHz：4
	Spread-spectrum Technique	DSSS(Direct sequence spread spectrum)
	Data Modulation	DBPSK、DQPSK、CCK、OFDM/OFDMA(BPSK/QPSK/16QAM/64QAM/256QAM/1024QAM)
	Sensitivity@PER (Package error rate)	270M：-68dBm@10% PER；130M： -68dBm@10% PER； 108M：-68dBm@10% PER；54M：-68dBm@10% PER 11M：-85dBm@8% PER；6M：-88dBm@10% PER 1M：-90dBm@8% PER；
	Transmission distance	Indoor Maximum 120 meters；Outdoor Maximum 360 meters(The distance depends on the environment)
	RF power	26dBm EIRP
	Antenna	5dBi Antennas

.4 Special function

Ø Support TR069,NAT,DMZ,DNS features

Ø Support Multiple ssid

Ø Support Multiple VLAN

Ø Support 802.11ax(WIFI6)

Ø Support MU-MIMO

Ø Support Easy Mesh

Ø Support IPV6 ,PPPoE, DHCP and Static IP configuration for WAN Interface

Ø Support IP, MAC filtering, Firewall Functionality in routed mode